

*Citation for published version:*

Rofcanin, Y, Heras , ML, Bosch, MJ, Wood, G & Mughal, F 2018, 'A Closer Look at the Positive Crossover between Supervisors and Subordinates The Role of Home and Work Engagement', Human Relations, pp. 1-29. <https://doi.org/10.1177/0018726718812599>

DOI:

[10.1177/0018726718812599](https://doi.org/10.1177/0018726718812599)

Publication date:

2018

Document Version

Peer reviewed version

[Link to publication](#)

Rofcanin et al., A closer look at the positive crossover between supervisors and subordinates: The role of home and work engagement, Human Relationspp. 1-29. Copyright © 2018 (SAGE). Reprinted by permission of SAGE Publications.

University of Bath

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Crossover of Work and Home Engagement

A Closer Look at the Positive Crossover between Supervisors and Subordinates

The Role of Home and Work Engagement

Abstract

How can we explain the crossover of positive experiences from supervisors to their subordinates? Drawing on crossover research and social learning theory (SLT), our main goal in this study is to explore mechanisms and boundary conditions to understand how positive crossover occurs from supervisors to their subordinates. We focus on the nature and foundations of positive crossover in the domains of work and home, and explore the downstream consequences for subordinates' domain-specific outcomes. Using matched supervisor-subordinate data, the results of multi-level analyses demonstrated that perceived organization support (POS) of subordinates does not impact on the positive association between supervisors' and subordinates' work engagement. However, family supportive supervisor behaviours (FSSBs), as perceived by subordinates, strengthen the positive association between supervisors' and subordinates' home engagement. Importantly, subordinates' work and home engagement explains why supervisors' state of engagement in work and home domains, respectively, influence subordinates' functioning in work and home domains, underscoring a trickle-down model. We contribute to crossover research through, demonstrating that crossover occurs from supervisors to their subordinates in work and family domains. Firstly, we highlight the role of relational mechanisms as boundary conditions of crossover process. Secondly, we extended the understanding of how crossover impacts on subordinates' key outcomes at work and home. Thirdly, we expand crossover research in an understudied context, Chile. In doing so, we contribute to the literature on Hierarchical Market Economies, through providing further insights on the operation of interpersonal ties and relations in such contexts.

Key Words: Crossover, work engagement, home engagement, POS, FSSB

Crossover of Work and Home Engagement

Structural changes and uncertainty in the global economy have made it increasingly difficult for organizations to offer continuity and security to their employees, potentially undermining their well-being (Benko and Weisberg, 2007). In the context of increasing interdependence and team work, understanding the micro-foundations through which well-being may be transmitted between individuals is of clear importance (Bakker and Demerouti, 2009). Although it is widely acknowledged that stress may be transmitted or *crossover* between peers, referring to as (Bakker and Leiter, 2010; Westman, 2001), it is similarly possible that positive experiences and feelings may crossover on vertical lines, up and down the organizational hierarchy, and beyond workplace boundaries (Bakker et al., 2009; Westman et al., 2009). Accordingly, the main aim of this research is to extend the literature through more closely exploring positive crossover from supervisors to their subordinates (i.e., top-down approach), and the downstream consequences of this for subordinates' within and beyond the work domain. The research is conducted in an emerging market setting, where, given institutional shortfalls, inter-personal ties assume greater importance (Schneider, 2009), and, hence, where cross over processes will be thrown into sharper relief. We draw on the mature literature on crossovers (Westman, 2001) and social learning theory (i.e., SLT, Bandura, 1986) in forming our hypotheses.

The contributions of this study is three-fold. Firstly, we focus on a *top-down transmission*¹ process from supervisors to their subordinates, unravelling *the crossover of*

¹ We focused on the crossover process from supervisors to their subordinates mainly for two reasons. A first reason relates to the key tenet of SLT that employee perceptions and their consequential behaviours are shaped by the informational cues present in the work environment (Pfeffer and Salancik, 1978). Among the people who provide cues, managers are key parties firstly because of their power in the hierarchy of supervisor-subordinate relationships and secondly because managers are seen as linchpins between organization and subordinates (Kossek et al., 2011). In relation to the above, a second reason relates to the tenet that individuals adopt attitudes (and consequential behaviours) by emulating those who have power, status and competence (Bandura, 1986). Thus by setting examples and delivering information cues to their subordinates, supervisors shape the perceptions, attitudes and behaviours of their subordinates. Beyond these theoretical underpinnings, we aimed to extend research which have started to explore the crossover of positive experiences among working couples (e.g., Demerouti, 2012) and peers (Bakker and Xanthopoulou, 2009) to supervisor-subordinate relationships. This perspective can also be considered a step to respond calls for studies to adopt multi-level approaches in crossover research (Bakker et al., 2009).

Crossover of Work and Home Engagement

positive experiences, i.e., work and home engagement (Westman, 2001; Bakker et al., 2009).

Focusing on the work and home domains, we propose that supervisors' work and home engagement are positively associated with subordinates' work and home engagement, respectively. We extend recent research which has mainly focused on crossover between peers (Bakker et al., 2009), and address calls for research to explore the dynamics of crossover from supervisors to their subordinates (Westman et al., 2009). Our focus on the crossover of positive experiences from supervisors to their subordinates is important:

Organisations along with HR departments may invest in creating a resourceful work environment where subordinates can tune into, emulate and learn from the positive well-being of their subordinates. Furthermore, in exploring the crossover of positive experiences via supervisors' and subordinates' engagement, we introduce a novel concept, home engagement into this research stream.

Our second contribution lies in exploring the mechanisms and boundary conditions of how crossover from supervisors to their subordinates takes place in the work and home domains. Crossover theory (Westman, 2006) suggests that communication, interaction and support among peers and partners constitute key mechanisms that may explain the crossover process. We introduce subordinates' POS and subordinates' perceived FSSBs, as contextual conditions, that may influence the crossover of supervisors' work and home engagement to their subordinates' work and home engagement, respectively. By so doing, in addition to some other potential contextual conditions demonstrated in recent research such as the frequency of communication between peers (Bakker and Xanthopoulou, 2009), supervisors' supportive behaviours toward their subordinates (ten Brummelhuis et al., 2014), and supervisors' positive emotions (ten Brummelhuis et al., 2014); our findings emphasize the role of POS and FSSBs, in work and home domains, to account for the crossover process. In a related vein, our focus on the trickle-down effect of supervisors' work and home

Crossover of Work and Home Engagement

engagement on subordinates' domain specific outcomes offers a novel perspective (Wo et al., 2015), supplementing and extending crossover research with key consequences for employees' physical and attitudinal well-being at work (Bakker and Demerouti, 2013).

Third, the context of this study can be considered a strength. This study is based on the case of a large Chilean firm which straddles both retail and financial services; it explores the nature and extent to which well-being may be transmitted, within a national context associated with macro-economic volatility. At macro level, Chile is generally held up as an example of the Resource Curse, which suggests that non-resource sectors face shortages of skills, innovation and other capabilities (Ross, 1999; Frankel, 2010). Again, shortcomings in the particular institutional arrangements encountered in Chile meant that informal ties assume greater significance (Schneider, 2009); however, as yet, the literature on such Hierarchical Market Economies has accorded only limited attention to the operation and consequences of interpersonal interactions within the firm, despite placing the latter at the centre of analysis (Wood et al., 2014). At micro level, Chile stands out among its Latin American HME peers in terms of the length of typical working hours. However, and more typical of the region, Chilean society characterised by the persistence of traditionalist religious and family centered values (UN, 2014); the latter may be a coping and supportive mechanism given macro-economic turbulence, and history of dictatorial rule (c.f. Schneider, 2009). It can thus be argued that such context specific dynamics vest personal ties and interactions, including the intra-organizational crossover process from supervisors to their subordinates, with particular importance. Whilst contexts cannot be seen as interchangeable, this study highlights key patterns of behaviour which, even if less immediately visible or accentuated, are likely to manifest themselves in a wide range of situations. In what follows, we develop our hypotheses, taking fuller account of contextual dynamics.

Crossover of Work and Home Engagement

Insert Figure 1 here

Context of Chile

We study our conceptual model in Chile. Key aspects pertaining to macro but mainly micro level contextual characteristics of Chile have informed our decision.

Macro-Context in Chile: Chile is considered to be a Hierarchical Market Economy, characterized by a high degree of interdependence between larger firms, and their smaller counterparts (Schneider, 2009). Non-market hierarchical relations remain central in terms of capital, technology allocations, employee support, and labour regulations (Ross, 1999). This is coupled with a tendency to under-invest in skills and competencies of employees, leading to high turnover issues for organizations. Thus, it could be argued that, in such settings, a greater load falls on the individual organization to devise compensatory strategies to motivate employees and keep them in the organizations.

Micro-Context in Chile: Two key characteristics of Chilean organizational culture make it an interesting context for our study. First, organisational culture in Chile is defined by paternalism: key features include closed decision making, notable lack of employee engagement and development as well as the dominant role of obedience and commitment (Aycan, 2006); as noted above, such embedded features in part represent a response to wider institutional and associated cultural realities (Schneider, 2009). More importantly, one relevant aspect of paternalism is that it is relational; behaviours of the supervisors to their subordinates are functions of the relationships between them (Aycan et al., 2013). In such work environments, it is interesting to observe the transmission of work engagement and what influences this transmission between a supervisor and a subordinate, which constitutes the first goal of this study.

Second is that Chilean society is highly conservative, holding patriarchal social attitudes, reinforced by traditionalist religious and family centered values (UN, 2014). As a

Crossover of Work and Home Engagement

result, Chileans keep close relations with the family members and for example taking care of children, as well as elderly constitute important roles ascribed to individuals in this society (e.g., Las Heras et al., 2017). Yet, at the same time, Chile ranks as one of the Latin American countries where employees work the longest number of hours (OECD, 2017; Vassolo, De Castro and Gomez-Mejia, 2011), making work-family conflict a major problem for organizations (OECD, 2017) and families. Moreover, similar to other countries, Chile's life expectancy at birth has grown over the recent past, reaching 80,5 years old in 2017 (77.4 for males and 83.4 for females), which means an increase of almost 8 years in the last three decades (in 1988 there was a life expectancy of 72.8, being 76,01 for females, and 69.7 for males; Life Expectancy, 2017). Many families feel under pressure to take care of elders at home, making the challenges of managing work and home more demanding.

Taking these unique characteristics into account, we note that organizations in Chile (including our own sample context) already acknowledge and realize the importance of work-family integration. Yet, they have been slow in adopting and implementing family friendly policies (Carlier et al., 2012; Poelmans et al., 2003). For these reasons, from the onset of this project, our second goal was to explore how informal family friendly policies of organizations (i.e., FSSBs) influence the transmission of home engagement between supervisors and their subordinates in Chile.

Theoretical Framework

Crossover theory

The process whereby the psychological stress or well-being experienced by one person affects the level of well-being of another person is referred to as *crossover* (Westman and Vinokur 1998; Westman, 2001). Crossover theory (Bakker and Demerouti, 2009' Westman, 2001) encompasses three broad perspectives (we should note that from now on we use *crossover* to refer to the transmission of positive experiences instead of strain). The first

Crossover of Work and Home Engagement

concerns the direct transmission of experiences between partners. The second suggests that the transmission of experiences between partners reflects the extent to which they are shared. Finally, relational components and interpersonal interactions, such as social support for the transmission of positive experiences, may act as mechanisms to explain the crossover between two partners (Westman, 2001).

Role modelling

According to SLT, learning takes place in a social context and it focuses on people learning from one another through imitation, observation and emulation of certain behaviours (Bandura, 1986). A key tenet of SLT is that learning takes place by observing, mimicking and emulating significant others' behaviours (Bandura, 1986). In particular, managers are emphasized to be key parties in triggering learning because they embody organisational values and set norms that shape the behaviours and learning patterns of their subordinates (Hammer et al., 2009).

Crossover of Work and Home Engagement: Effects on Domain Specific Outcomes

We propose that there is positive association between supervisors' and their subordinates' work engagement. In line with previous research, we examine work engagement as an overall construct yet we expect the dimensions of work engagement (i.e., vigour, dedication and absorption) to crossover for a range of different reasons. From an affect-emotion perspective, the crossover of dedication may result from subordinates' conscious efforts to "tune in" to the emotions of their supervisors and as a consequence, experience the same feelings and attitudes (Bakker and Demerouti, 2009). This suggests that dedication expressed by supervisors may fuel that of subordinates because their thoughts are focused on these aspects of the job that make them enthusiastic about the work. Regarding vigour and absorption, we expect behavioural modelling to explain the crossover between supervisors and their subordinates. Social learning theory emphasizes the importance of role

Crossover of Work and Home Engagement

models for employees' behaviours and attitudes within the organisational context (Bandura, 1986). According to this theory, learning takes place by observing and mimicking significant others who act as role models for one's own expectations (Neff, Sonnentag, Niessen, and Unger, 2013). In the context of our research, we suggest that subordinates are likely to be more energetic as a result of working with and imitating the behaviours of vigorous supervisors. Similarly, subordinates who work with supervisors immersed in their works, are likely to imitate and adopt these behaviours, leading them to be similarly absorbed into their jobs (Bakker and Xanthopoulou, 2009). In support of our argument, the results in ten Brummehuis et al.'s (2014) study revealed that managers' engagement was positively associated with subordinates' engagement due to perspective taking and empathic reactions of subordinates.

Adopting a similar rationale, we propose that there is positive association between supervisors' and their subordinates' home engagement. We conceptualize home engagement as a state of home related well-being in which individuals (both supervisors and subordinates) experience their 'off-job time' for reenergizing their depleted resources. Spending time in particular activities (e.g. attending to intimate relations, caregiving, chores etc.) within the home domain is likely to affect individual's emotional well-being and satisfaction (Edwards & Van Harrison, 1993). Greenhaus and Powell (2003) further note that engagement in home activities recharges individuals and enhances positive feelings and their sense of achievement.

It can thus be argued that home-engaged managers are likely to be great at expressing and radiating their positive emotions to their subordinates and inspiring them through role modelling even they are at work (Bakker and Leiter, 2010). If supervisors are perceived to be dedicated to their family lives, subordinates are likely to adopt a similar point of view and experience similar feelings towards their families. We thus expect that feelings of

Crossover of Work and Home Engagement

supervisors' dedication to their family lives would encourage subordinates' to give more attention to their own family lives (e.g., enjoying a relaxing evening with them; talking about the needs of children). Moreover, working with supervisors who feel energetic about their family lives (e.g., doing family trips, travelling abroad with family members) may trigger subordinates to model and emulate such behaviours.

It may be possible that what happens in the home domain of a supervisors' life may remain unobservable by their subordinates. However, the effect of being reenergized and engaged at home tends to influence supervisor's mood and emotional state, which we believe is embedded within supervisor-subordinate dyadic interactions (e.g. Gutterman et al. 2017). In line with the actor-partner interdependence model (Baker & Xanthapoulou, 2009), we consider the supervisor and their subordinates as nested within dyads that facilitate the transfer of well-being through actor-partner effect in which subordinates as partners compare, observe, learn and adapt their emotional states from that of their supervisors (actor) (Kenny et al. 2008; Bandura, 1977). In our study, the crossover of home engagement is likely to be facilitated through the interactions between the supervisor and subordinate.

During these interactions, subordinates are likely to pick-up on supervisors' actions, feelings and thoughts as observable affective states influencing supervisor behaviour (Lefkowitz, 2010). In relation to these points, Gutterman et al (2017), drawing upon the LMX theory (e.g. Schriesheim et al., 1999), suggest that these interactions act as mechanisms for the transference of positive experiences and well-being that in turn effect subordinates' positive experiences and well-being. Given the context of Chile is predominantly shaped by close supervisor-subordinate interactions (i.e., Vassolo, De Castro and Gomez-Mejia, 2011), paternalistic leadership style (Aycan, 2006) and a central role placed on family (e.g., in Chile, family plays a prominent role and people often talk about family life in the work domain. Chileans appreciate that others, even in the work domain, show a genuine interest in their

Crossover of Work and Home Engagement

family; Vassolo et al., 2011); we expect to observe positive crossover of home engagement from supervisors to their subordinates.

Since home engagement is a novel concept, there is not, to the best of our knowledge, evidence supporting its crossover between supervisors and subordinates. However, and indirectly supporting our arguments, the findings of Carlson et al. (2011) demonstrated that supervisors' work-family enrichment was positively associated with subordinates' work-family enrichment unravelling an affective route mechanism. The results in Braun and Peus (2016) revealed that supervisors' work-life balance was positively associated with subordinates' work-life balance. Integrating the above arguments, and combining the affective route and behavioural modelling approaches, our first hypothesis is:

H1A: There is a positive crossover of work engagement from supervisors to their subordinates.

H1B: There is a positive crossover of home engagement from supervisors to their subordinates.

Furthermore, we argue that work and home engagement represent mechanisms through which the impact of supervisors' work and home engagement translate on subordinates' domain specific outcomes. In forming our arguments, we draw on a key tenet of SLT (Bandura, 1986) that people only imitate or model the behaviours of others if they expect positive outcomes by executing these behaviours. *"By thinking about the consequences of model's behaviour, an observer is likely to gain information that will help to form outcome expectancies"* (Manz and Sims, 1981, p. 106). This suggests that a person performs certain behaviors by observing a model and the (potential) consequences of that behavior. According to Bandura (1986), most behaviors demonstrated by people are learned through example. Model characteristics (e.g. status) are usually considered when judging whether the behaviour is appropriate to imitate and whether it will lead to valued outcomes in

Crossover of Work and Home Engagement

work and non-work domains (e.g., Bakker, Rodriguez-Munoz, and Sanz-Vergel, 2016).

Therefore, models are very important, because they allow people to predict outcomes and consequences, but also because it enables them to acquire larger units of behaviors in a shorter period of time, that otherwise would require a constant trial and error.

Thus, a person (here the subordinates) induces association between certain behaviors and their consequences (Postmes et al., 2000). Reflecting on this, by observing their supervisors, subordinates are likely to infer which behaviors are appropriate and rewarding in the work and in the home domains. Turning to the context of our study, when subordinates observe that their supervisors are engaged in their work, they (subordinates) are likely to feel the same, due to crossover and exhibit rewarding behaviors while working on their own tasks. We adopt a similar logic in explaining the role of home engagement: when subordinates observe that their supervisors enjoy the positive consequences of being engaged in their home domains (e.g., satisfied with their home lives; positive and energetic), they are likely to emulate similar behaviours and feel the same. Research on crossover, broadly, supports our arguments, underpinning a positive spiral of behaviours and emotions in a dyadic relationship, in different domains (Bakker et al., 2014; Zimmermann et al., 2011).

H2A. Subordinates' work engagement mediates the positive association between supervisors' work engagement and subordinates' work performance.

H2B. Subordinates' home engagement mediates the positive associations between supervisors' home engagement and subordinates' satisfaction with their family lives.

The Moderating Roles of POS and FSSBs on the Crossover Process

Crossover theory proposes that interactions between partners (i.e., supervisors and their subordinates here) explain how and why crossover unfolds (Westman et al., 2009). To expand our model further and in line with crossover theory, we integrate the role of POS and FSSBs to account for the crossover of work and home engagement, respectively. POS refers

Crossover of Work and Home Engagement

to employees' work related general perceptions concerning the extent to which the organization values their contributions and cares about their well-being (Eisenberger et al., 1986). The perceptions of subordinates play a key role in establishing the norms and therefore shaping the perceptions of POS. From subordinates' perceptions, high POS indicates that the organization cares for the contributions, performance and well-being of its employees (Bhave et al., 2010). A key tenet of POS is that perceived supportiveness of the organization shapes the degree to which there is on-going interaction and communication between supervisors and their subordinates (Rhoades and Eisenberger, 2002).

Turning to our model, from a subordinate perspective, expecting that the organization as a whole will value and acknowledge their efforts and contributions in the future, subordinates are more likely to model the behaviours and tune into the emotions of their supervisors. In contrast, low perceptions of POS show that supervisors feel unsure about the (future) intentions of the organization (Rhoades and Eisenberger, 2002). Thus, they might be more cautious in their interactions with their subordinates, and be less open toward them, rendering the transmission of work engagement from supervisors to their subordinates less likely. Furthermore, subordinates are less likely to model and adopt the behaviours and emotions of their supervisors because they realise that their organization is not likely to value their efforts and contributions in the future (e.g., Eisenberger et al., 2014). This suggests that, even if supervisors are engaged to their works (i.e., high work engagement), working in a context where POS is low (i.e., low POS), makes it less likely for subordinates to look up to and emulate the behaviours and emotions of their supervisors. We thus hypothesise:

H3A. Subordinates' POS moderate the crossover of work engagement from supervisors to their subordinates: (a) this crossover be strongest (v.s. weakest) in the case of supervisors whose POS is high (vs. low).

Crossover of Work and Home Engagement

Crossover theory proposes that interactions, behaviours and communications between dyad partners may explain how and why crossover takes place (Westman, 2006).

Specifically, Westman (2006) states that social support (either in the work domain or home domain) may moderate the crossover process between the members of a dyad (i.e., supervisors – subordinates). From this angle, we focus on FSSBs, which offer employees resources and flexibility for coping with responsibilities at home (e.g., Lapierre and Allen, 2006; Matthews et al., 2014). These behaviours consist of providing employees with emotional and cognitive support, being role models, and coming up with creative solutions to work–family problems. FSSBs provide cues to subordinates, signaling that their family life is valued (Kossek et al., 2011).

In a context where supervisors display FSSBs (high FSSBs), we propose that the positive association between supervisors' and subordinates' home engagement strengthens. FSSBs entail role modelling behaviours aimed at contributing to one's family life and displaying more FSSBs indicate that these supervisors communicate with and share family related issues with their subordinates (Hammer et al., 2009). By doing so, subordinates understand that their family lives are valued by their supervisors (Hammer et al., 2013). Moreover, these subordinates are more likely to model, emulate and adopt the emotions and attitudes of their supervisors (i.e., home engagement of supervisors), because the display of FSSBs is an indication that engaging with family is a priority and norm in this work setting (Rofcanin et al., 2017). Therefore; observing that the behaviours of supervisors (high FSSBs) and their engagement of family lives (high home engagement) are in congruence; subordinates are likely to feel the same, and exhibit high home engagement. In a context where supervisors display high levels of FSSBs (high FSSBs), even if supervisors are not engaged to their family lives (low home engagement), subordinates may still focus on and engage to their family lives (high home engagement), because engaging with one's family is

Crossover of Work and Home Engagement

valued and appreciated in such a work setting (as indicated by the display of high FSSBs) and subordinates are likely be rewarded and expect positive consequences of engaging in their family lives (Bandura, 1986).

On the contrary, if supervisors do not display FSSBs (low FSSBs), subordinates are not likely to model and emulate the moods and attitudes of their supervisors even if their supervisors are engaged in their family lives (high supervisor home engagement), making the crossover less likely from supervisors to subordinates. This is because the lack of family oriented supervisor behaviours indicate that family lives of subordinates are not considered priority in the organisational context and in cases subordinates experience family issues, employees do not have the leeway to openly communicate and discuss their issues with their supervisors. This suggests that, even if supervisors are dedicated to their family lives (high family engagement), lack of organisational context and norms to support subordinates' family lives (low FSSBs) create an environment where subordinates feel reluctant and even hesitant to model their supervisors. (Kossek, Pichler, et al., 2011). We thus hypothesise:

H3B. Subordinates' perceptions of FSSBs moderate the crossover of home engagement from supervisors to their subordinates: (a) this crossover will be strongest (v.s. weakest) in the case of subordinates whose perceptions of FSSBs are high (vs. low).

Method

Research Context and Procedure

We investigated our conceptual model in the relatively under-investigated context of Chile as part of a larger research project carried out by the research center of a European business school. The participants in this study were full-time employees of a large company (e.g., UTI-SA) operating in retail and financial services. We accessed our company through

Crossover of Work and Home Engagement

non-academic partners² and coordinated³ with the HR division of the company to select most representative supervisor-subordinate dyads from the company (Ellis, 2010). Before the study began, the company managers and employees were briefed about the purpose, procedure and confidentiality of the study.

We used online surveys. We back-translated the survey items to increase face validity (Brislin, 1986; Prieto, 1992). We used e-mails as IDs to match the data from the subordinates and their direct supervisors. We invited 423 employees to participate in the study as subordinates, and obtained 293 fully usable responses (68 percent). We invited 143 employees to participate as supervisors, and obtained 109 responses (76 percent). Due to missing data, we finally had matched data for 289 responses (289 subordinates; 102 supervisors). The average age of subordinates was 37 years ($SD = 9.8$ years); 38 percent were male. The average age of supervisors was 39 years ($SD = 8.1$ years), and 52 percent were male. On average, supervisors had 2.3 subordinates reporting to them.

Measures

Unless otherwise stated, all items were measured on a 7-point Likert scale (from 1 = strongly disagree to 7 = strongly agree).

Work Engagement. To evaluate supervisors' and employees' work engagement, we utilized the nine-item Utrecht Work Engagement Scale (UWES; vigor, dedication, absorption; Schaufeli, Bakker, and Salanova, 2006) and aggregated vigor, dedication, and absorption to a composite work engagement score ($\alpha = .88$ for supervisors; $\alpha = .90$ for subordinates).

² The non-academic partners in Chile represent part of a Foundation whose mission is to help companies in the country become better employers in terms of enabling employees achieve better work-life balance. The researchers offered survey tools and the Foundation secured access to companies. The Foundation representatives met with various organizations that might be interested in the project in return for the executive summary of the findings.

³ One of the co-authors, responsible from the coordination of data collection, worked with HR division to select a wide range of representative employees from the company. A power analysis, with 95 confidence interval to achieve representativeness, is carried out in selecting the supervisor-subordinate dyads.

Crossover of Work and Home Engagement

Example items are as follow: “I feel bursting with energy” (vigor), “My job inspires me” (dedication), and “I am immersed in my work” (absorption).

Home Engagement. To measure supervisors’ and employees’ home engagement, we adapted the original Utrecht Work Engagement Scale for the home domain, naming it as home engagement (UWES; i.e., vigor, dedication, absorption; Schaufeli, Bakker, and Salanova, 2006) and aggregated vigor, dedication, and absorption into a composite home engagement score ($\alpha = .81$ for supervisors; $\alpha = .73$ for subordinates). Example items are as follow: “When at home, I feel bursting with energy” (vigor), “I am proud of my family” (dedication), and “I get carried away when I am with my family” (absorption).

POS. Subordinates evaluated their perceptions of POS with four items from the scale of Eisenberger et al. (1986) which were used in recent research (e.g., Las Heras et al., 2015). An example item was: “The organization is sincerely concerned about my well-being” ($\alpha = .94$).

FSSB. Subordinates evaluated FSSBs using the seven items from the scale developed by Hammer et al. (2009). Items capture emotional support (2 items; e.g., “My supervisor takes time to learn about my personal needs”), instrumental support (2 items; e.g., “I can depend on my supervisor to help me with scheduling conflicts if I need it”), role model (2 items; e.g., “My supervisor is a good role model for work and non-work balance”), and creative work–family management dimensions (1 item; “My supervisor thinks about how the work in my department can be organized to jointly benefit employees and the company”). Due to resource constraints, we used two items, which had the highest factor loadings in their corresponding sub-dimensions. We combined these sub-dimensions to an aggregate FSSB score (.99).

Crossover of Work and Home Engagement

Subordinate Work Performance. For each of their subordinates, managers evaluated the work performance using three items (Williams and Anderson, 1991). An example item for work performance was: “S/he adequately completes assigned duties” ($\alpha = 0.73$).

Subordinate Satisfaction in Non-Work Life. Subordinates evaluated the extent to which they were satisfied with their non-work domains, using the four-item scale developed by Glenn and Weaver (1981). An example item is “I am satisfied with my family life” ($\alpha = 0.84$).

Controls

We included the age, gender, and number of children of subordinates and their supervisors and the length of the dyadic relationship between subordinate and supervisor (measured as a continuous variable). Age and the number of children were measured as continuous variables. Gender was assigned the values of 1 = male and 2 = female.

Furthermore, we controlled for work-to-family (nine items, Carlson et al., 2009) as well as family-to-work (FTW; nine items, Carlson et al., 2009) enrichment and conflict. In line with previous research on spillover between work and home (e.g., Siu et al., 2015), we initially controlled for these two constructs to strengthen our focus on crossover and go above and beyond the potential impact of spillover of conflict and enrichment between domains in our model. The strengths and directions of our hypotheses did not change after having controlled for these constructs. Therefore, in line with suggestions to achieve parsimony, we excluded these control variables from our analyses (Becker et al., 2016).

Analytical Strategy

To control for the nested structure of our data (work performance was evaluated by managers; on average 2.82 employees), we applied multi-level regression analyses using MLwiN software. In order to evaluate whether multi-level modelling was the right approach, we calculated the ICC (1) values for supervisor rated work performance. The ICC (1) for work performance was 19 percent; meaning 19 percent of variance in work performance is

Crossover of Work and Home Engagement

attributable to supervisor evaluations (Hox, 2002). These findings suggested that it was appropriate to use multi-level analysis. For our centering strategy⁴, we followed suggestions in multi-level analyses (Raudenbush and Bryk, 2002) and strategies adopted in recent research utilizing similar constructs (e.g., Las Heras et al., 2017).

To test our mediation hypothesis, we conducted Monte Carlo (MC) simulations with 20,000 iterations to obtain confidence intervals for our proposed indirect effects (MacKinnon and Fairchild, 2009). We used an online tool developed by Selig and Preacher (2008) to calculate confidence intervals. When confidence intervals do not contain zero, the indirect association is significant. To test our moderation hypotheses, we plotted simple slopes at one standard deviation below and above the mean of the moderator (Aiken and West, 1991).

Results

Table 1 displays the means, standard deviations, correlations and internal reliability values of our study variables.

Insert Table 1 here

We conducted CFA's (AMOS 18) including constructs that are evaluated only by subordinates (measured at the same time) and by supervisors (measured at the same time). Drawing on Marsh et al. (2013), we have adopted item-parcelling approach in our CFA's. The authors suggest that when sample size is small to capture the measurement model and when an SEM approach is not utilised the in manuscript, item-parcelling can be adopted. This aligns with our approach of utilising multi-level regression analyses which takes into account the average value of each construct (Raudenbush and Bryk, 2002). In line with research on work engagement (Bakker, 2018; Petrou et al., 2017), we used vigor, dedication and

⁴ More information can be provided on centering strategy upon request.

Crossover of Work and Home Engagement

absorption as three parcels (with corresponding item loading onto their parcels). Similar to work engagement, we used vigor, dedication and absorption as parcels of home engagement.

For subordinate evaluated constructs, a measurement model distinguishing between work engagement, home engagement, POS, FSSB and satisfaction in non-work life demonstrated good fit ($\chi^2=370.982$; $df = 179$, $\chi^2/df = 2.07$; $p < 0.001$; CFI = 0.95; TLI = 0.94; RMSEA = 0.06). This model fitted data better compared to a model where home and work engagement are combined ($\chi^2=556.983$; $df = 183$, $\chi^2/df = 3.04$; $p < 0.001$; CFI = 0.90; TLI = 0.89; RMSEA = 0.09). For supervisor evaluated constructs, a measurement model distinguishing between work engagement, home engagement and work performance demonstrated good fit ($\chi^2=47.753$; $df = 24$, $\chi^2/df = 1.99$; $p < 0.001$; CFI = 0.97; TLI = 0.96; RMSEA = 0.06). This model fitted data better compared to a model where home and work engagement are combined ($\chi^2=260.153$; $df = 26$, $\chi^2/df = 10.01$; $p < 0.001$; CFI = 0.74; TLI = 0.65; RMSEA = 0.18). Finally, our measurement model including all variables demonstrated good fit with the data ($\chi^2=647.274$; $df = 377$, $\chi^2/df = 1.72$; $p < 0.001$; CFI = 0.95; TLI = 0.94; RMSEA = 0.05).

Hypothesis 1(A) postulated positive crossover of work engagement from supervisors to their subordinates. Results supported this hypothesis ($\gamma = .22$, $p < .01$; Please see Table 2 Model 1). Hypothesis 1 (B) proposed positive crossover of home engagement from supervisors to their subordinates, which is also supported ($\gamma = .27$, $p < .001$; Please see Table 2 Model 3). Hypothesis 2 (A) postulated that subordinates' work engagement mediates the positive association between supervisors' work engagement and subordinates' work performance. Results supported this hypothesis (95% CI = [0.029/0.133]). Hypothesis 2 (B) postulated that subordinates' home engagement mediates the positive association between supervisors' home engagement and subordinates' satisfaction with their family lives. Results supported this hypothesis (95% CI = [0.054/0.265]).

Crossover of Work and Home Engagement

Insert Table 2 here

Hypothesis 3 (A) proposed that subordinates' POS would strengthen the positive association between supervisors' and subordinates' work engagement, facilitating the crossover process. The interaction term was not significant, hence this hypothesis was not supported ($\gamma = .03$, n.s.; Please see Table 3 Model 2). This finding suggests that the level of supportiveness as perceived by subordinates of the organization does not influence the positive crossover of work engagement from supervisors to their subordinates. Furthermore, findings reveal that subordinates' POS does not moderate the mediation of subordinates' work engagement between supervisors' work engagement and subordinates' work performance as the interaction is non-significant.

Hypothesis 3 (B) postulated that subordinates' perceptions of FSSBs would strengthen the crossover of home engagement from supervisors to their subordinates. The interaction term was significant, supporting this hypothesis ($\gamma = .18$, $p < .05$; see Figure 2 for a visual representation of the interaction; Table 2 Model 4). We plotted the interaction at 1+ (-) of the mean value of the moderator. At high levels of FSSB (value = 7), the crossover of home engagement from supervisors to their subordinates strengthened (gradient of simple slope = 1.49, t value of simple slope = 2.29, $p < .05$). At low levels of FSSB (value = 5.86), the crossover of home engagement was still significant and positive (gradient of simple slope = 1.28, t value of simple slope = 2.34, $p < .05$).

Insert Figure 2 here; Insert Table 3 here

Additional Analyses

To strengthen the validity of our findings, we ran alternative models. In Alternative Model 1; we re-ran all of our hypotheses assuming and testing crossover from subordinates to

Crossover of Work and Home Engagement

their supervisors. The results demonstrated that; the reversed associations were only statistically significant for the association between subordinates' and supervisors' work and home engagement ($y = .15$; $p < .05$; crossover of work engagement from subordinates to their supervisors; $y = .12$; $p < .05$; crossover of home engagement from subordinates to their supervisors). However, the indirect associations from subordinates to supervisors were not statistically significant.

In Alternative Model 2, we have explored the positive associations between work and home engagement: The association between supervisors' work and home engagement is non-significant ($\gamma = .06$, n.s. for when supervisors' home engagement predicts supervisors' work engagement; $\gamma = .03$, n.s. for when supervisors' work engagement predicts supervisors' home engagement). Similarly, the association between subordinates' work and home engagement is non-significant ($\gamma = .04$, n.s. for when subordinates' home engagement predicts subordinates' work engagement; $\gamma = .14$, n.s. for when subordinates' work engagement predicts subordinates' home engagement). Together, these results seem to suggest that our findings, the crossover of work and home engagement in work and family domains, go above and beyond the impact of spillover. These two alternative models support the presence of top-down process of crossover in work and family domains, above and beyond the impact of potential spillover between domains.

Discussion

The definition of crossover has recently evolved into “*a bi-directional transmission of positive and negative emotions, mood, and dispositions between intimately connected individuals such as spouses or organizational team members*” (Westman et al., 2009, p.7). Reflecting on this definition and drawing on the argument that the scope of crossover should include the transmission of positive experiences, dispositions and emotions (Westman et al., 2009); we set out to explore crossover of work and home engagement between supervisors

Crossover of Work and Home Engagement

and their subordinates, with consequential impact on subordinates' domain-specific outcomes.

The first contribution of this study relates to our focus on a *top-down transmission* process from supervisors to subordinates, underlining and exploring *the crossover of positive experiences*, i.e., work and home engagement (Westman, 2001; Bakker et al., 2009).

Westman (2001) proposed that crossover not only takes places among colleagues occupying same hierarchies, but also at different hierarchical levels (Westman et al., 2009). Similarly, Bakker et al. (2009) argued that crossover research, to date, has mainly focused on family members as incumbents of crossover process. However, according to role theory that forms the backbone of crossover theory, the scope of crossover research can be extended to include employees as role senders in the work environment. By so doing, the conceptualisation of the unit of analysis in the crossover research can be broadened to include dyads of supervisors and their subordinates (Bakker et al., 2009).

Despite the acknowledgment, only recently studies have started exploring the role managers play in transmitting their emotions, dispositions and behaviours to their subordinates in the context of crossover research: The findings in Braun and Peus (2016) revealed that managers' servant leadership is positively associated with subordinates' job satisfaction via contributing to subordinates' work-life balance satisfaction. Ten Brummelhuis et al. (2014) revealed that supervisors' family-to-work conflict (FWC) and enrichment (FWE) influence subordinates' work engagement / burnout via influencing first supervisors' and then consequently subordinates' emotions (both positive and negative), providing support for the affective mechanism of crossover. Interestingly, their findings did not provide support for the behavioural mechanism (i.e., leader supportive behaviours) of crossover. The findings in Carlson et al. (2011) provide support for the affective mechanism in crossover, demonstrating that supervisors' work-to-family enrichment is positively

Crossover of Work and Home Engagement

associated with subordinates' work-to-family enrichment because supervisors' experiences of enrichment encourage outwardly oriented thoughts, emotions and actions, that promote subordinate perceptions of a family-friendly work environment. Beyond the earlier research which has focused on leadership styles (Braun and Peus, 2016) or leaders' experiences of enrichment or conflict in both domains (ten Brummelhuis et al., 2014), our findings support the role of work and home engagement, as separate constructs and representing two separate domains, to explain the crossover between supervisors and their subordinates.

This focus is in line with few studies that have solely focused crossover between intimate partners, without necessarily focusing on the spillover process that may precede it (Bakker et al., 2005; Demerouti et al., 2005). Indeed, recent review studies on spillover-crossover point out that the integration and examination of spillover-crossover into one conceptual model may be most appropriate involving focal employees, intimate partners and co-workers (e.g., couples, partners; Bakker and Demerouti, 2013). This is because the positive and negative experiences from one domain may first spillover to the other domain (e.g., from work to home), and then impact on the partner of the focal individual (e.g., co-worker, spouse, kid or partner). Drawing on this logic, we carried out several post-hoc analyses to explore whether the spillover from work-to-home and from home-to-work (for both the supervisors and their subordinates) may explain the crossover within the two domains. Our results support that, irrespective of the enrichment or conflict that supervisors and their subordinates experience within the two domains, crossover of engagement takes place. Our results therefore go above and beyond the impact of spillover and point out to the role of other potential mechanisms in accounting for how crossover takes place in these domains (Westman et al., 2009).

In following the arguments above, our second contribution lies in exploring the boundary conditions that explain when and how crossover of work and home engagement

Crossover of Work and Home Engagement

unfolds between supervisors and their subordinates. Westman (2006) suggested that communication and interaction of partners is one mechanism that may explain the crossover process. Our findings indeed demonstrated that the crossover of home engagement was moderated by subordinates' perceived FSSBs, respectively. In relation to the lack of moderating role of POS on the crossover of work engagement, recent work and review on work engagement supports that work engagement it is a high-activation state of well-being and emotional state; those who are engaged are likely to radiate positive emotions to others and inspire them with their active and follower-focused positive energy, irrespective of the context and norms of the organisation (Bakker, 2017). Furthermore, our focus on POS contributes to recent few studies emphasizing the role of communication and interactions: Bakker and Xanthopoulou (2009) revealed that the crossover of work engagement between colleagues at day level was moderated by the frequency of communication between these colleagues; such that on days when colleagues communicated more frequently, the crossover of work engagement strengthened. Our findings expand this study by demonstrating the crossover from supervisors to their subordinates and examining the role of supervisors' POS as a boundary condition, at the between-level of analysis. It may be that the role of communication and perceived supportiveness of the organisation differs in between-levels of analyses compared to within-level of analyses. As such, engaged managers are known to focus on their own emotions and radiate positive affective states to their followers, and this is likely to be prevalent and observed in work contexts irrespective of the varying levels of POS.

Relatedly, another contribution of our study is that we focus on a new construct "home engagement" and demonstrate that, similar to work engagement, supervisors are able to transmit their states of home engagement to their subordinates. Home-engaged managers are likely to be great at expressing enthusiasm, radiating positive emotions and influence

Crossover of Work and Home Engagement

their followers to mimic and adopt similar dispositions for their own states of home engagement (Tims et al., 2011). We note that similar to the characteristics of work engagement, home engagement is an active state of mind, long lasting and enduring in the work domain as well (Bakker, 2009). Supervisors' FSSBs might explain how supervisors' home engagement translated into subordinates' home engagement, underlining the role of consistency and integrity in supervisors' behaviours and affective experiences (Illies et al., 2007). The latter helps ensure sufficient social information and cues are communicated to their subordinates (Rofcanin, Las Heras, and Bakker, 2017). Thus, when subordinates observe that their supervisors are home engaged and reflect their engagement in exhibiting FSSBs; these subordinates are likely to tune into, mimic and adopt a similar state of mind and be more home-engaged. FSSBs, in combination with home engagement, may be considered as novel affective and behavioural mechanisms, shedding lights on how crossover of positive experiences takes place in the home domain.

Our study also contributes to research on the trickle-down models of positive experiences (Wo et al., 2015). Our findings underlined the trickle-down effect of supervisors' work and home engagement, revealing that crossover in work and home explains why and how employees function better at work and home, respectively. More specifically, we demonstrated that due to crossover of work engagement, subordinates showed enhanced work performance. Adopting a similar logic in a home domain, our findings supported that supervisors who are in a state of engagement express and reflect their positive experiences on their subordinates, leading them to enjoy more satisfaction with non-work. This is a novel perspective, supplementing and extending crossover research, which, as noted above, has mainly focused on the crossover within the work domains or, in a limited number of studies, from the work to home domains (i.e., spillover), overlooking the possibility that crossover at

Crossover of Work and Home Engagement

home is itself a unique process, with key consequences for employees' physical and attitudinal well-being at work (Bakker and Demerouti, 2013).

Finally, this study is unique in terms of its context. Previous research on crossover has been conducted mainly in Anglo-Saxon (Anand et al., 2010) and continental European contexts (one of the limited exceptions is Bakker et al., 2011); our study provides empirical evidence on how crossover operates in less-developed economies, with very different institutional conditions. Our findings suggest that the concept of crossover between supervisors and subordinates is important and relevant in Chile, where keeping close family ties, and separation of gender roles in terms of work and home remain cultural norms (Lara, 2004). Again, Chile has undergone major political and economic changes, and continues to experience macro-economic volatility and other negative resource curse effects (Frankel, 2010). The latter has included a historical tendency to under-invest in skills and capabilities at systemic level; this would highlight the importance of compensatory practices at firm level, and the extent to which the localised inter-personal ties may be vested with a particular importance in helping secure organizational competitiveness.

Strengths and Limitations

The first limitation relates to the cross-sectional design of the study, which limits rigorous testing of the causality underlying our hypotheses. We mainly built on the crossover theory and frameworks of POS and FSSBs in forming the directions of associations. However, we tested three alternative models to eliminate potential explanations from our proposed conceptual model. In the first alternative model, we explored the crossover from subordinates to their supervisors. In the second alternative model, we explored the spillover of engagement from work to home (and vice versa). In the third alternative model, we explored the moderating role of FSSBs on the association between supervisors' and subordinates' work engagement and the moderating role of POS on the association between

Crossover of Work and Home Engagement

supervisors' and subordinates' home engagement. Results from additional analyses mostly support that our conceptual model holds true (results are available upon request). It can thus be concluded that CMB is unlikely to have affected our findings. We suggest the use of a longitudinal design for future research, with a pre-determined time lag between each variable (e.g., six months to a year, which would be consistent with research on work engagement; Bakker and Schaufeli, 2014).

In this research, we focused on work and home engagement to explore crossover between supervisors and their subordinates. This was mainly because engaged employees are sources of inspiration and role models for others, radiating positive energy and creating a cohesive team environment (Engelbrecht, 2006). These characteristics of engaged employees make it relevant to explore how crossover takes place at work and at home. However, future research could explore other mechanisms: One potential avenue is to integrate work-self and family-self facilitation (Demerouti, 2012) concepts into crossover research. Work-self facilitation (WSF) and family-self facilitation (FSF) occur when resources generated at work and home help one function better and develop positive affect while pursuing personal interests. Another avenue of future research may be to focus on whether and how prosocial (motivation to help co-workers at work domain; Grant, 2007) and family (motivation to help family members at home domain; Menges et al., 2017) motivation crossover between supervisors and their subordinates. Furthermore, given the lack of significance of subordinates' POS, it may be interesting to explore the moderating role of other organizational contextual variables, such as team orientation, team cohesiveness or task interdependence that may shape the mediation of subordinates' work engagement.

Crossover theory underlines that the transmission of positive experiences between two people may be due to the impact of a shared environment and being subject to same conditions, creating a spurious effect in the crossover process (Westman, 2001). In the

Crossover of Work and Home Engagement

context of our study, we argued that for supervisors whose perception of organizational supportiveness is higher (vs. lower), the transmission of work engagement to subordinates is stronger because POS indicates supportive and resourceful work environment where supervisors approach their subordinates and facilitate engaging and learning environments. However, the reason underlying crossover of work engagement may be other factors, such as the provision of training, development opportunities and enhancement oriented HR practices made available to all employees. While Bakker et al. (2009) argued that positive perceptions of climate may strengthen the crossover of positive experiences, future research is suggested to disentangle how and why being subject to same working environment and conditions may account for the crossover process. One possible way to approach this question is to evaluate climate of the work environment (e.g., team cohesiveness, team support, organizational culture).

In developing our arguments for the crossover of home engagement from supervisors to their subordinates, we built on the argument that home-engaged supervisors experience activated positive state of well-being, radiating positive emotions to their subordinates and influence them (Bakker, 2009). This perspective builds on the assumption that home-engaged supervisors maintain their positive affective states at work and subordinates are this likely to tune into their emotions. Moreover, this is line with the context of Chile, where supervisors develop and maintain informal, high quality LMX relationships with their supervisors and reflect the central role of family in their interactions (e.g., Vassolo et al., 2011). While this perspective is in line with Westman's (2001) argument that individuals can imagine and mimic others' emotions, sharing a same environment, i.e., home, may be a stronger indicator for the crossover of home engagement. Future research to explore how state of engagement at home crosses over between spouses or members of the family (i.e., children, elderlies or partners). Another avenue of research is to expand our model in contexts where sharing of

Crossover of Work and Home Engagement

family experiences at work is not relevant and central in forming supervisor – subordinate LMX relations (e.g., countries which rate high on work orientation or individualism).

In our study, we adopted a top-down approach and explored how supervisors' work and home engagement crossover to their subordinates. Our choice was mainly driven by the leadership as well as supervisor-subordinate dynamics observed in this context: Leadership in Chile is characterized by paternalism where managers are viewed as dominant fatherly figures (Aycan, 2006). Moreover, research conducted in South and Central American contexts (e.g., El Salvador) support that subordinates look up to, imitate and emulate the behaviours of their supervisors (e.g., Rofcanin et al., 2018; Las Heras et al., 2017). Nevertheless, we carried out post-hoc analyses to explore if crossover of work and home engagement takes place from subordinates to supervisors. Findings did not support these alternative propositions. Future research may explore under which conditions the crossover of work and home engagement unfold from subordinates to supervisors.

The generalisability of our results is limited by the contextual characteristics of Chile: In work contexts, supervisor-subordinate relations are characterized by paternalism. In non-work contexts, keeping close family ties, taking care of family members are important and gender roles are segregated. Although women often work and generate income outside their homes, they are almost exclusively responsible for housework and childcare. These aspects might have thrown our findings into clearer relief, but they may also have biased them, emphasizing the importance of context in the crossover process in work and home domains; other features of work life and supervisor-subordinate dynamics may become visible in different institutional settings. In order to generalise our findings to other contexts, future research might be undertaken integrating culture-related measures such as collectivism, the relative effectiveness of institutional arrangements, and family orientation

Crossover of Work and Home Engagement

unique to this context (Fouad and Arbona, 1994; House et al., 2004), and through replicating the study in other social contexts.

Practical Implications

Organisations should facilitate work and home engagement among its employees, because this spreads from supervisors to their subordinates and drive their functioning in both domains. Accordingly, the allocation of job (e.g., feedback, coaching, autonomy) and home (e.g., flexible work times, schedules, spouse support) resources could facilitate both work and home engagement, respectively. Second, our findings showed that in organisations where FSSBs are more prevalent; the transmission of home engagement from supervisors to their subordinates strengthened. Accordingly, with regards to the role of FSSBs, HR departments should work in collaboration with supervisors to train, educate and increase awareness of exhibiting family supportive behaviours (Li and Bagger, 2011). Similar to Odle-Dusseau et al.'s (2016) implementation, we suggest periodic interventions and face-to-face workshops to assess employees' family needs (e.g., elderly care). After face-to-face workshops, which might be delivered by HR executives and senior managers on the importance of balancing family and work, follow-up procedures might track employees, for example through self-monitoring tools or cards (as developed by Hammer et al., 2009) to explore how they perform in their home and work domains. Third in order to facilitate the trickle-down effects of supervisors' work and home engagement to drive better work and family outcomes, we suggest behavioural modelling techniques which would involve viewing an appropriate model (e.g. a manager), determining how the behaviour is implemented (FSSBs), discussing the effectiveness of the behaviour, and practising the behaviour, for example through simultaneous role plays (Gibson, 2004).

REFERENCES

Aiken LS and West SG (1991) Multiple regression: Testing and interpreting interactions.
Newbury Park: Sage.

Crossover of Work and Home Engagement

- Aycan Z (2006) Paternalism: towards conceptual refinement and operationalization. In: Yang KS, Hwang KK and Kim U (eds) *Scientific Advances in Indigenous Psychologies: Empirical, Philosophical and Cultural Contributions*. Cambridge: Cambridge University Press, pp. 445–466.
- Aycan Z Kanungo RN Mendonca M, et al. (2000) Impact of culture on human resource management practices: a 10-country comparison. *Applied Psychology: An International Review* 49(1): 192–221.
- Bakker AB Demerouti E and Schaufeli WB (2005) Crossover of burnout and work engagement among working couples. *Human Relations* 58, 661–689.
- Bakker AB Van Emmerik IJH and Euwema MC (2006) Crossover of burnout and engagement in work teams. *Work & Occupations* 33, 464–489.
- Bakker AB Demerouti E and Dollard M (2008) How job demands influence partners' experience of exhaustion: Integrating work–family conflict and crossover theory. *Journal of Applied Psychology* 93, 901–911.
- Bakker AB Westman M and Van Emmerik IJH (2009) Advancements in crossover theory. *Journal of Managerial Psychology* 24, 206–219.
- Bakker AB and Demerouti E (2009) The crossover of work engagement between working couples: A closer look at the role of empathy. *Journal of Managerial Psychology* 24, 220–236.
- Bakker AB and Xanthopoulou D (2009) The crossover of daily work engagement: Test of an actor–partner interdependence model. *Journal of Applied Psychology* 94, 1562–1571.
- Bakker AB and Leiter MP (Eds.) (2010) *Work engagement: A handbook of essential theory and research*. New York, NY: Psychology Press.
- Bakker AB Shimazu A Demerouti E Shimada K and Kawakami N (2011) Crossover of work engagement among Japanese couples: Perspective taking by both partners. *Journal of Occupational Health Psychology* 16, 112–125.
- Bakker AB and Demerouti E (2013) The Spillover-Crossover model. In J. Grzywacz & E. Demerouti (Eds.), *New frontiers in work and family research* (pp. 54–70). Hove Sussex: Psychology Press.
- Bakker AB Shimazu A Demerouti E Shimada K and Kawakami N (2014) Work engagement versus workaholism: A test of the spillover-crossover model. *Journal of Managerial Psychology* 29, 63–80.
- Bakker AB Rodriguez-Munoz A and Sanz-Vergel AI (2016) Modelling of job crafting behaviours: Implications for work engagement. *Human Relations*, 69, 169–189.

Crossover of Work and Home Engagement

- Bakker AB (2017) Strategic and proactive approaches to work engagement. *Organizational Dynamics*, 46: 67-75.
- Bandura A (1986) *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Becker TE Atinc G Breugh JA Carlson KD Edwards JR and Spector PE (2015) Statistical control in correlational studies: 10 essential recommendations for organizational researchers. *Journal of Organizational Behavior* 37, 157–167.
- Benko C and Weisberg A (2007) *Mass career customization: Aligning the workplace with today's nontraditional workforce*. Boston, MA: Harvard Business School Press.
- Bhave DP Kramer A and Glomb TM (2010) Work–family conflict in work groups: Social information processing, support, and demographic dissimilarity. *Journal of Applied Psychology* 95, 145–158.
- Braun S and Peus C (2016) Crossover of work-life balance perceptions: Does authentic leadership matter. *Journal of Business Ethics*. DOI: <https://doi.org/10.1007/s10551-016-3078-x>.
- Brislin RW (1986) The wording of translation of research instruments. In: Lonner, W. J., & Berry, J. W. (Eds.), *Field methods in cross-cultural research* (pp. 137–164). Beverly Hills, CA: Sage.
- Carlier SI Llorente CL Grau Grau M (2012) Comparing work-life balance in Spanish and Latin-American countries. *European Journal of Training and Development*, 36: 2/3:286-307.
- Carlson DS Kacmar KM Wayne JH and Grzywacz JG (2006) Measuring the positive side of the work–family interface: Development and validation of a work–family enrichment scale. *Journal of Vocational Behavior* 68, 131–164.
- Demerouti E (2012) The spillover and crossover of resources among partners: The role of work-self and family-self facilitation. *Journal of Occupational Health Psychology*, 17(2), 184-195.
- Edwards, J. R., and van Harrison, R. (1993) Job demands and worker health: Three-dimensional re-examination of the relationship between person-environment fit and strain. *Journal of Applied Psychology*, 78, 628–648.
- Eisenberger R Huntington R Hutchison S and Sowa D (1986) Perceived organizational support. *Journal of Applied Psychology* 71, 500–507.

Crossover of Work and Home Engagement

- Eisenberger R Shoss MK Karagonlar G Gonzalez-Morales MG Wickham RE and Buffardi L C (2014) The supervisor POS–LMX–subordinate POS chain: Moderation by reciprocity awareness and supervisor's organizational embodiment. *Journal of Organizational Behavior* 35, 635–656.
- Ellis PD (2010) The essential guide to effect sizes: Statistical power, meta-analysis, and the interpretation of research results. Cambridge: Cambridge University Press.
- Frankel JA (2010) *The natural resource curse: a survey* (No. w15836). National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w15836>
- Fouad NA and Arbona C (1994) Careers in a cultural context. *Career Development Quarterly*, 43, 96-104.
- Gibson SK (2004) Social learning (cognitive) theory and implications for human resource development. *Advances in Developing Human Resources* 6(2): 193–210. [L]_{SEP}
- Glenn ND and Weaver CN (1981) The Contribution of Marital Happiness to Global Happiness. *Journal of Marriage and Family* 43, 161-168.
- Grant AM (2007) Relational job design and the motivation to make a prosocial difference. *Academy of Management Review*, 32(2), 393–417.
- Greenhaus, J. H., and Powell, G. N. (2003). When work and family collide: Deciding between competing role demands. *Organizational Behavior and Human Decision Processes*, 90, 291– 303
- Gutermann, D., Lehmann-Willenbrock, N., Boer, D., Born, M., & Voelpel, S. C. (2017). How Leaders Affect Followers' Work Engagement and Performance: Integrating Leader– Member Exchange and Crossover Theory. *British Journal of Management*, 28(2), 299-314.
- Hammer LB Kossek EE Yragui NL Bodner TE and Hanson GC (2009) Development and validation of a multidimensional measure of family supportive supervisor behaviors (FSSB). *Journal of Management* 35, 837– 856.
- Hammer LB Kossek EE Bodner T and Crain T (2013) Measurement development and validation of the Family Supportive Supervisor Behavior—Short Form (FSSB-SF). *Journal of Occupational Health Psychology*, 18, 285–296.
- House RJ Hanges PJ Javidan M Dorfman PW and Gupta V (Eds.) (2004) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, CA: Sage.
- Hox J (2002) Multilevel analysis. Techniques and applications. Mahwah, NJ: Erlbaum.

Crossover of Work and Home Engagement

- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2008). *Dyadic data analysis*. New York: The Guilford Press
- Koch AR and Binnewies C (2015) Setting a good example: Supervisors as work–life-friendly role models within the context of boundary management. *Journal of Occupational Health Psychology*, 20(1), 82–92. doi:[10.1037/a0037890](https://doi.org/10.1037/a0037890).
- Kossek EE (2005) Workplace policies and practices to support work and families: Gaps in implementation and linkages to individual and organizational effectiveness. In S. Bianchi, L. Casper, & R. King (Eds.), *Workforce, workplace mismatch work, family, health and well-being* (pp. 97–116). Mahwah, NJ: Erlbaum.
- Kossek EE Baltes BB and Matthews RA (2011) How work–family research can finally have an impact in organizations. *Industrial and Organizational Psychology: Perspectives on Science and Practice* 4, 352–369.
- Kreiner GE (2006) Consequences of work-home segmentation or integration: A person–environment fit perspective. *Journal of Organizational Behavior* 27, 485–507.
- Lapierre LM and Allen TD (2006) Work-supportive family, family-supportive supervision, use of organizational benefits, and problem-focused coping: Implications for work–family conflict and employee well-being. *Journal of Occupational Health Psychology*, 11, 169–181.
- Las Heras M Bosch MJ and Raes AM (2015) Sequential mediation among family friendly culture and outcomes. *Journal of Business Research* 68, 2366–2373.
- Li A and Bagger J (2011) Walking in your shoes: Interactive effects of child care responsibility difference and gender similarity on supervisory family support and work-related outcomes. *Group & Organization Management*, 36(6), 659–691.
- Little, T. D., Cunningham, W. A., Shahar, G., and Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modelling*, 9, 151–173.
- MacKinnon DP and Fairchild AJ (2009) Current directions in mediation analysis. *Current Directions in Psychological Science* 18, 16–20.
- Manz CC and Sims HP (1981) Vicarious learning: The influences of modeling on organizational behavior. *Academy of Management Review*, 6, 105–113.
- Marsh, H.W., Lüdtke, O., Nagengast, B., Morin, A.J.S., von Davier, M. (2013). Why Item Parcels Are (Almost) Never Appropriate: Two Wrongs Do Not Make a Right—

Crossover of Work and Home Engagement

- Camouflaging Misspecification with Item Parcels in CFA Models. *Psychological Methods*, 18(3). 257-284.
- Menges JI Tussing DV Wihler A and Grant AM (2017) When job performance is all relative: how family motivation energizes effort and compensates for intrinsic motivation. *Academy of Management Journal*, 60(2), 695–719.
- Neff A Niessen C Sonnentag S and Unger D (2013) Expanding crossover research: The crossover of job-related self-efficacy within couples. *Human Relations*, 66, 803-827.
- Odle-Dusseau HN Britt TW and Greene-Shortridge TM (2012) Organizational work–family resources as predictors of job performance and attitudes: The process of work–family conflict and enrichment. *Journal of Occupational Health Psychology* 17, 28 – 40.
- Odle-Dusseau HN Hammer LB Crain TL and Bodner TE (2016) The influence of family-supportive supervisor training on employee job performance and attitudes: An organizational work–family intervention. *Journal of Occupational Health Psychology*, 21(3), 296–308.
- OECD (2017). Retrieved on the 15th of March, 2018: <https://data.oecd.org/emp/hours-worked.htm>.
- Pfeffer J and Salancik GR (1978) *The external control of organizations: A resource dependence perspective*, Harper & Row, New York.
- Poelmans S Chinchilla N and Cardona P (2003) The adoption of family-friendly HRM policies. Competing for scarce resources in the labour market, *International Journal of Manpower*, 24: 128-47.
- Prieto A (1992) A method for translation of instruments to other languages. *Adult Education Quarterly* 43, 1–14.
- Raudenbush SW and Bryk AS (2002) *Hierarchical linear models: Applications and data analysis methods*, 2nd edition. Newbury Park, CA: Sage.
- Rofcanin Y Las Heras M and Bakker AB (2017). Family supportive supervisor behaviours and culture: Effects on work engagement and performance. *Journal of Occupational Health Psychology* 22, 207-217.
- Rofcanin Y Las Heras M Bal MB van der Heijden, B and Erdogan D (2018) A trickle-down model of task and developmental i-deals. *Human Relations*, doi: 10.1177/0018726717751613.
- Schaufeli WB and Bakker AB (2004) Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior* 25, 293–315.

Crossover of Work and Home Engagement

- Schneider BR (2009) Hierarchical market economies and varieties of capitalism in Latin America. *Journal of Latin American Studies* 41, 553-575.
- Selig JP and Preacher KJ (2008) *Monte Carlo method for assessing mediation: An interactive tool for creating confidence intervals for indirect effects* [computer software]. Available from: <http://quantpsy.org/>.
- Siu O Bakker AB Brough P Lu C Wang H Kalliath T O'Driscoll M Lu J and Timms C (2015) A three-wave study of antecedents of work-family enrichment: The roles of social resources and affect. *Stress and Health* 31, 306-314.
- Snape E and Redman T (2010) HRM practices, organizational citizenship behaviour, and performance: A multi-level analysis. *Journal of Management Studies* 47, 55–95.
- Ten Brummelhuis LL Haar JM and Roche M (2014) Does family life help to be a better leader? A closer look at crossover processes from leaders to followers. *Personnel Psychology* 67, 917-949.
- Tims M Bakker AB and Xanthopoulou D (2011) Do transformational leaders enhance their followers' daily work engagement? *The Leadership Quarterly* 22, 121-131.
- Thompson CA Beauvais LL and Lyness KS (1999) When work– family benefits are not enough: The influence of work–family culture on benefit utilization, organizational attachment, and work–family conflict. *Journal of Vocational Behavior* 54, 392–415.
- UN (2014) UN Working Group on the issue of discrimination against women in law and in practice finalizes country mission to Chile. Retrieved on the 22nd of March, 2018 and available at: <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15005&LangID=E>
- Xanthopoulou D Bakker AB Demerouti E and Schaufeli WB (2009) Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior* 74, 235-244.
- Van Wingerden, J., Bakker, A.B., & Derks, D. (2016). A test of a Job Demands-Resources intervention. *Journal of Managerial Psychology*, 31, 686-701.
- Vassolo, R., DeCastro, J., & Gomez-Mejia, L. R. (2011). Managing in Latin America: Challenges and a future research agenda. *Academy of Management Perspectives*, 25(4), 20–34
- Volman, F. E., Bakker, A. B., & Xanthopoulou, D. (2013). Recovery at home and performance at work: A diary study on self–family facilitation. *European Journal of Work and Organizational Psychology*, 22(2), 218-234.

Crossover of Work and Home Engagement

Westman M (2001) Stress and strain crossover. *Human Relations* 54, 557–591.

Westman M Brough P and Kalliath T (2009) Expert commentary on work–life balance and crossover of emotions and experiences: Theoretical and practice advancements. *Journal of Organizational Behaviour* 30, 587–595.

Westman M and Vinokur A (1998) Unravelling the relationship of distress levels within couples: Common stressors, empathic reactions or crossover via social interaction? *Human Relations* 51, 137–156.

Williams LJ and Anderson SE (1991) Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behavior. *Journal of Management* 17, 601–617.

Wo DXH Ambrose ML and Schminke M (2015) What drives trickle-down effects? A test of multiple mediation processes. *Academy of Management Journal*, 58, 1848-68.

World Life Expectancy (2017) Retrieved on the 21st of March, 2018 and available on-line at: <http://www.worldlifeexpectancy.com/chile-life-expectancy>

Zimmermann BK Dormann C and Dollard MF (2011) On the positive aspects of customers: Customer-initiated support and affective crossover in employee–customer dyads. *Journal of Occupational and Organizational Psychology*, 84(1), 31-57.

Crossover of Work and Home Engagement

Table 1. Means, standard deviations, reliabilities and correlations

Variables	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1 Supervisors' work engagement	4.79	0.98	(0.87)							
2 Subordinates' work engagement	5.31	1.08	.18**	(0.90)						
3 Supervisors' home engagement	6.35	0.69	0.13*	0.11	(0.81)					
4 Subordinates' home engagement	6.36	0.61	0.01	0.27**	0.31**	(0.73)				
5 POS	4.73	1.53	0.19**	0.55**	0.04	0.18**	(0.94)			
6 FSSBs	6.86	0.41	0.03	0.19**	0.10	0.53**	0.06	(0.93)		
7 Work performance	5.35	1.14	0.03	0.34**	0.05	0.12*	0.18**	0.16**	(0.74)	
8 Satisfaction in non-work life	4.79	1.42	0.04	0.41**	0.06	0.19**	0.28**	0.22**	0.21**	(0.84)

Notes. Reliabilities are along the diagonal in parentheses, where applicable.

n = 289 subordinates; 102 supervisors.

* p < 0.05; ** p < 0.01; *** p < 0.001.

Crossover of Work and Home Engagement

Table 2. Direct and Indirect Associations (H1 & H2)

	Subordinates' Work Engagement			Work Performance			Subordinates' Home Engagement			Satisfaction in Non-Work Life		
	<i>Model 1</i>			<i>Model 2</i>			<i>Model 3</i>			<i>Model 4</i>		
Variables	Estimates	SE	t	Estimates	SE	t	Estimates	SE	t	Estimates	SE	t
Intercept	5.31	0.07	75.85	5.39	0.08	67.38	6.37	0.04	159.25	4.79	0.82	5.84
Supervisors' work engagement	0.22	0.07	3.14**	0.03	0.08	0.37						
Supervisors' home engagement							0.27	0.04	6.75***	0.01	0.13	0.08
Subordinates' work engagement				0.35	0.06	5.83***						
Subordinates' home engagement										0.46	0.15	3.07**
Change in 2 log likelihood												
Level 1 intercept variance (SE)	0.15	0.08		0.23	0.09		0.02	0.02		0.01	0.002	
Level 2 intercept variance (SE)	0.98	0.07		0.94	0.09		0.32	0.03		1.99	0.03	

Notes. For all values, gamma coefficients, their corresponding standard error and t values are reported.

Level 1 variables: Subordinates' work and home engagement; Level 2 variables: Work performance and Satisfaction in non-work life

The indirect effect is calculated using an online interactive tool that generates an R score (<http://quantpsy.org/medmc/medmc.htm>).

N = 289 subordinates; 102 supervisors.

* p < 0.05; **p < 0.01; ***p < 0.001.

Crossover of Work and Home Engagement

Table 3. Moderaton Analyses (H3)

Variables	Subordinates' Work Engagement						Subordinates' Home Engagement					
	<i>Model 1</i>			<i>Model 2</i>			<i>Model 3</i>			<i>Model 4</i>		
	Estimates	SE	t	Estimates	SE	t	Estimates	SE	t	Estimates	SE	t
Intercept	5.31	0.05	61.83	5.31	0.06	88.51	6.37	0.03	212	6.37	0.03	212
Supervisors' work engagement	0.12	0.06	2.00*	0.12	0.06	2.00*						
POS	0.39	0.03	13.00***	0.38	0.03	12.66***						
Supervisors' work engagement * POS				0.04	0.03	1.33						
Supervisors' home engagement							0.23	0.04	5.75***	0.23	0.04	5.75***
FSSBs							0.75	0.07	10.71***	0.82	0.08	10.31***
Supervisors' home engagement * FSSBs										0.18	0.09	2.00*
Change in 2 log likelihood												
Level 1 intercept variance (SE)	0.17	0.06		0.17	0.06		0.02	0.02		0.01	0.01	
Level 2 intercept variance (SE)	0.63	0.06		0.63	0.6		0.23	0.02		0.22	0.02	

Notes. For all values, gamma coefficients, their corresponding standard error and t values are reported.

N = 289 subordinates; 102 supervisors.

* p < 0.05; **p < 0.01; ***p < 0.001.

Crossover of Work and Home Engagement

Figure 1. Conceptual Model

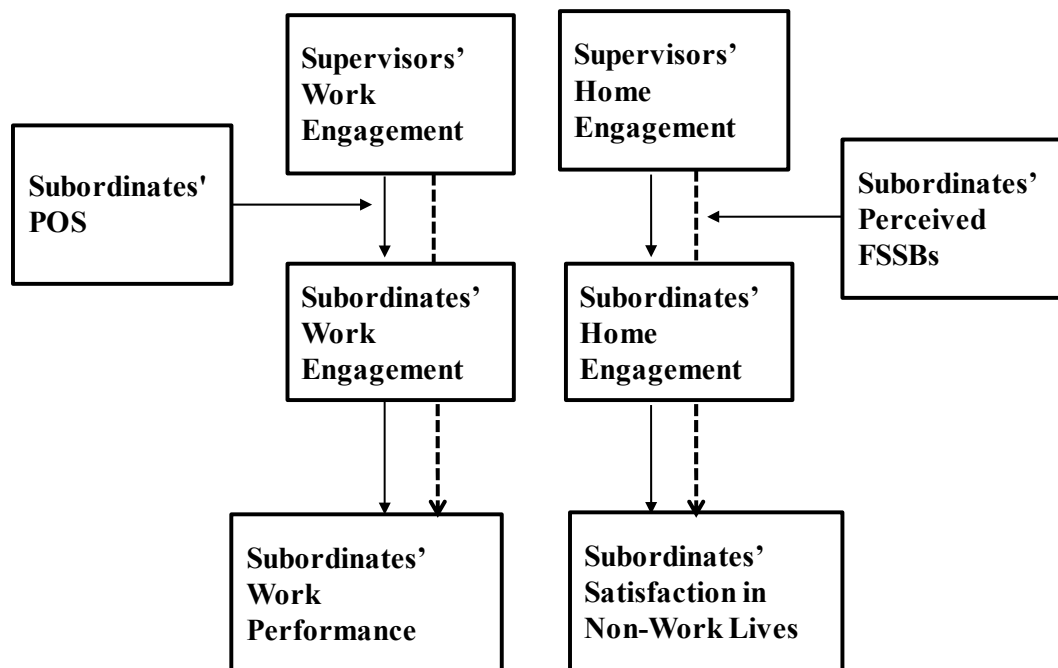
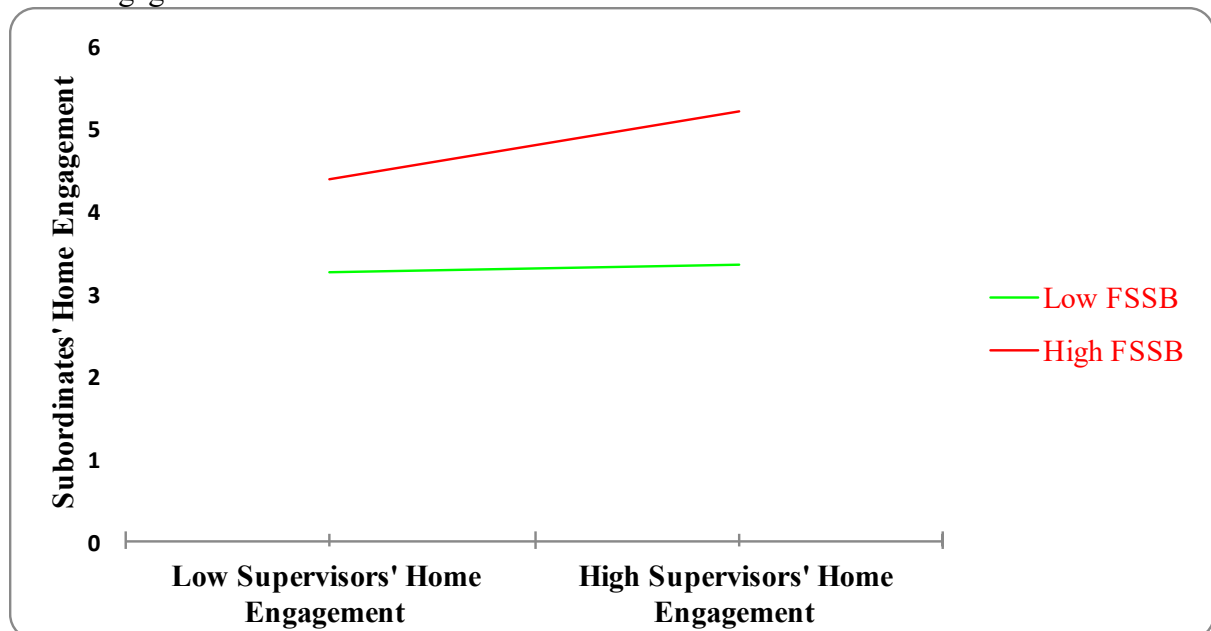


Figure 2. Interaction of supervisor FSSBs and supervisor home engagement on subordinate home engagement



Crossover of Work and Home Engagement